Amendments to the Claims

1. (Currently Amended) An optimal recording method for optical recording media comprising the steps of:

(a) recording optional data, as test data, onto a desired area of an optical recording medium while varying respective values of at least two factors each having an influence on data recording characteristics of the optical recording medium when data is recorded on the optical recording medium, wherein the two factors comprise a recording power value, and a characteristic value of recording pulses;

(b) reproducing the test data respectively recorded at the varied values of factors; and

(c) determining values of the factors involving an optimum recording condition, based on reproduction characteristics of the reproduced test data.

2. (Currently Amended) The optimal recording method according to claim 1, wherein the ~~factor values comprise a recording power value, and a~~ characteristic value of recording pulses includes a width and/or level of ~~recording pulses.~~

3. (Original) The optimal recording method according to claim 1, further comprising the step of:

recording input data onto the optical recording medium, using the determined factor values involving the optimum recording condition.

4. (Currently Amended) An optimal recording method for optical recording media comprising:

a first test data recording step of recording optional data, as test data, onto a portion of a test area in an optical recording medium while varying the value of a first factor having an influence on data recording characteristics of the optical recording medium when data is recorded on the optical recording medium, the first factor value is associated with an optimum recording power; and

a second test data recording step of recording optional data, as test data, onto the remaining portion of the test area while varying the value of a second factor having an influence on the data recording characteristics of the optical recording medium when data is ~~to be~~ recorded on the optical recording medium, the second factor value is associated with characteristics of recording pulses other than recording power.

5. (Original) The optimal recording medium according to claim 4, wherein the second recording step comprises the steps of:

reproducing the test data recorded at the first test data recording step, thereby determining the first factor values used at the first test data recording step;

recording test data onto the remaining portion of the test area while varying the second factor value at each of the determined first factor values.

6. (Original) The optimal recording method according to claim 5, further comprising the steps of:

reproducing the test data recorded at the second test data recording step, thereby detecting respective jitters of the resultant reproduced signals; and

determining an optimum one of the second factor values, based on the detected jitters.

7. (Original) The optimal recording method according to claim 6, wherein the jitter detecting step comprises the steps of:

extracting a variation in 3T component length from each of the reproduced signals; and

detecting the jitter of the reproduced signal, based on the extracted variation.

8. (Canceled)

9. (Canceled)

10. (Currently Amended) The optimal recording method according to claim ~~9~~ 4, wherein ~~when the second factor value is associated with characteristics of recording pulses,~~ the variation of the second factor value is carried out by varying a level of the recording pulses used to record data for the same signal or varying a width of the recording pulses used to record data for the same signal.

11. (Original) The optimal recording method according to claim 10, wherein the recording pulse level variation is carried out by varying a focusing distance between the optical recording medium and an optical pick-up used in association with the optical recording medium.

12. (Original) An optimal recording method for optical recording media comprising the steps of:

(a) reading out a reference power value recorded on an optical recording medium;

(b) recording optional data, as test data, onto a first field of a test area in the optical recording medium while varying a recording power value with

reference to the read reference power;

(c) reproducing the test data recorded on the first field, thereby determining an optimum recording power value, based on characteristics of the resultant reproduced signals;

(d) recording optional data, as test data, onto the test area while varying a format of recording signals, using the determined optimum recording power value; and

(e) reproducing the test data, recorded in accordance with the varied recording signal format, determining an optimum recording strategy based on characteristics of the resultant reproduced signals, and storing the optimum recording strategy.

13. (Original) An optimal recording apparatus for optical recording media comprising:

recording means for recording optional data, as test data, onto a test area of an optical recording medium while varying a format of recording signals;

reproduction means for reproducing the test data;

jitter measuring means for measuring respective jitters of reproduced signals outputted from the reproduction means; and

control means for determining an optimum write strategy, based on the measured jitters.

14. (Original) The optimal recording apparatus according to claim 13, wherein the recording means is adapted to adjust a focusing distance between the optical recording medium and an optical pick-up used in association with the optical recording medium.

15. (Original) The optimal recording apparatus according to claim 13, further comprising:

reproduction means for extracting a reference power value recorded on a predetermined region of the optical recording medium,

wherein the recording means is adapted to vary the recording signal format with reference to the extracted reference power value.

16. (Original) The optimal recording apparatus according to claim 13, wherein the jitter measuring means comprises:

detection means for detecting a signal of specific length components from each of the reproduced signals, and detecting an inter-edge temporal difference of the length component signal from a reference signal;

integration means for deriving respective inter-edge temporal difference values at leading and trailing edges of the length component signal, based on an output signal from the detection means, and outputting the derived values as

integrated signals, respectively; and

jitter calculation means for calculating a jitter of the reproduced signal, based on a signal indicative of a difference between the integrated signals.

17. (Currently Amended) ~~A re-writable~~ An optical recording medium having a test area for recording test data thereon, wherein the test area comprises:

a first field on which a value of a factor having an influence on recording characteristics is recorded, as test data, while being varied; and

at least one second field on which a value of another factor having an influence on the recording characteristics is recorded, as test data, while being varied.

18. (Currently Amended) The ~~re-writable~~ optical recording medium according to claim 17, wherein the first field is a field on which a recording power value is recorded, as test data, while being varied, for a detection of an optimum recording power.

19. (Currently Amended) The ~~re-writable~~ optical recording medium according to claim 17, wherein the second field is a field on which a format of recording pulses is recorded, as test data, while being varied, for a determination of a recording signal format involving an optimum recording condition.

20. (New) An optimal recording method for optical recording media comprising the steps of:

recording test data onto a test area of an optical recording medium while varying a format of recording signals, and reproducing test data;

measuring respective jitters of reproduced signals; and

determining an optimum write strategy based on the measured jitters.

21. (New) The method of claim 20, wherein the varying step adjusts a focusing distance between the optical recording medium and an optical pick-up used in association with the optical recording medium.

22. (New) The method of claim 20, further comprising:

extracting a reference power value recorded on a predetermined region of the optical recording medium, wherein the varying step varies the recording format with respect to the extracted reference power value.